

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (original) A method for reviewing voltage contrast defects on a semiconductor specimen comprising:
 - turning on an electron flood gun;
 - applying a surface charge to a semiconductor specimen by using the flood gun;
 - turning off the electron flood gun;
 - using an electron beam generator to direct an electron beam upon the surface of the specimen, wherein the electron beam causes secondary electrons to emanate from the specimen;
 - detecting the secondary electrons in order to locate voltage contrast defects; and
 - reviewing the located voltage contrast defects.
2. (original) A method as recited in claim 1 wherein the surface charge is applied to the entire surface of the specimen.
3. (original) A method as recited in claim 1 wherein the surface has a negative or positive charge.
4. (original) A method as recited in claim 1 wherein the operations of claim 1 are repeated such that during each iteration, voltage contrast defects in a new sub-region are detected and reviewed.
5. (original) A method as recited in claim 1 further comprising:
 - reapplying a surface charge to the semiconductor specimen using the flood gun when the charge on the specimen is determined to be insufficient for voltage contrast effects to manifest.
6. (original) A method as recited in claim 1 further comprising:
 - positioning a specimen charge electrode above the semiconductor specimen; and
 - while the flood gun is turned on, biasing the specimen charge electrode at a certain voltage level in order to obtain a desired charge amount on the semiconductor specimen.
7. (original) A method as recited in claim 6 wherein the specimen charge electrode is negatively biased whereby a negative charge is applied to the semiconductor specimen.

8. (original) A method as recited in claim 6 wherein the specimen charge electrode is positively biased whereby a positive charge is applied to the semiconductor specimen.
9. (original) A method as recited in claim 1 further comprising:
supporting the semiconductor specimen with a specimen stage, wherein the semiconductor specimen and the specimen stage are in electrical contact; and
biasing the specimen stage at a certain voltage level in order to obtain a desired surface charge amount on the semiconductor specimen.
10. (original) A method as recited in claim 9 wherein the specimen stage is positively biased whereby a negative charge is applied to the semiconductor specimen.
11. (original) A method as recited in claim 9 wherein the specimen stage is negatively biased whereby a positive charge is applied to the semiconductor specimen.
12. (original) A method as recited in claim 1 wherein the operation of reviewing the located voltage contrast defect involves energy dispersive x-ray analysis techniques or cross-sectioning tools.
13. (original) A method as recited in claim 1 wherein the electron beam generator produces an electron beam having a current level approximately within the range of 10-50 pico Amps.
14. (original) A method as recited in claim 13 further comprising:
detecting voltage contrast defects within features on the semiconductor specimen that have high aspect ratios.
15. (original) A method as recited in claim 1 wherein a scanning electron microscope inspection system is used for review.

Claims 16- 19 (cancelled)